

Docket No: A-95-12
V-C-1

RESPONSE TO COMMENTS

Public Health and Environmental Radiation
Protection Standards
for Yucca Mountain, Nevada
40 CFR Part 197

June, 2001

Office of Radiation and Indoor Air
U.S. Environmental Protection Agency
Washington, D.C.

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Introduction

The Environmental Protection Agency (EPA) has promulgated public health and safety standards for radioactive material stored or disposed of in the potential repository at Yucca Mountain, Nevada. Section 801 of the Energy Policy Act of 1992 [(EnPA, Pub. L. 102-486, 42 U.S.C. § 10141 n. (1994))] directed EPA to develop these standards. Section 801 of the EnPA also required EPA to contract with the National Academy of Sciences (NAS) to conduct a study to provide findings and recommendations on reasonable standards for protection of the public health and safety. The health and safety standards promulgated by EPA are “based upon and consistent with” the findings and recommendations of NAS in its 1995 report titled: "Technical Bases for Yucca Mountain Standards"(NAS Report, Docket A-95-12, Item II-A-1).

The Nuclear Regulatory Commission (NRC) will incorporate EPA’s final standards into its licensing regulations. The Department of Energy (DOE) must demonstrate compliance with these standards. The NRC will use its licensing regulations to determine whether DOE has demonstrated compliance with standards prior to receiving the necessary licenses to store or dispose of radioactive material at Yucca Mountain.

What is Yucca Mountain?

Yucca Mountain is the site of DOE’s potential geologic repository designed to dispose of spent nuclear fuel (SNF) and high-level radioactive waste (HLW). If approved, the site would be the nation’s first geologic repository for disposal of this type of radioactive waste.

The potential Yucca Mountain repository is above a large, deep source of fresh water, currently used as agricultural and drinking water. This water feeds a larger ground water basin south of the site which has the potential to supply many more people in the surrounding areas.

The site is located in Nye County, Nevada, about 100 miles northwest of Las Vegas on federally owned land on the western edge of DOE’s Nevada Test Site (NTS). The repository would be approximately 1,000 feet below the top of the mountain and 1,000 feet above the ground water.

Background

The SNF and HLW have been produced since the 1940s, mainly as a result of commercial power production and defense activities. Since then, the proper disposal of these wastes has been the responsibility of the Federal Government. The Nuclear Waste Policy Act of 1982 (NWPAA, Pub. L. 97-425) formalizes the current Federal program for the disposal of SNF and HLW by:

- (1) making DOE responsible for siting, building, and operating an underground geologic repository for the disposal of SNF and HLW;
- (2) directing EPA to set generally applicable environmental radiation protection standards

based upon authority established under other laws¹, and

(3) requiring the NRC to implement our standards by incorporating them into its licensing requirements for SNF and HLW repositories.

The EnPA, enacted in 1992, continues these general responsibilities. Thus, NRC will issue implementing regulations for this rule. The DOE will submit a license application to NRC. The NRC then will determine whether DOE has met the standards and whether to issue a license for Yucca Mountain. The NRC will require DOE to comply with all of the applicable provisions of 40 CFR part 197 before authorizing DOE to construct the repository and receive radioactive material on the Yucca Mountain site.

In 1985, EPA established generic standards for the management, storage, and disposal of SNF, HLW, and transuranic (TRU) radioactive waste (see 40 CFR part 191, 50 FR 38066, September 19, 1985), which apply to any facilities for the storage or disposal of these wastes, including Yucca Mountain. In 1987, the U.S. Court of Appeals for the First Circuit remanded the disposal standards in 40 CFR part 191 (*NRDC v. EPA*, 824 F.2d 1258 (1st Cir. 1987)). As discussed below, EPA later amended and reissued these standards to address issues that the court raised.

Also in 1987, the Nuclear Waste Policy Amendments Act (NWPAA, Pub. L. 100-203) amended the NWPA by, among other actions, selecting Yucca Mountain, Nevada, as the only potential site that DOE should characterize for a long-term geologic repository.

In October 1992, the Waste Isolation Pilot Plant Land Withdrawal Act (WIPP LWA, Pub. L. 102-579) and the EnPA became law. These statutes changed EPA's obligations concerning radiation standards for the Yucca Mountain candidate repository. The WIPP LWA:

(1) reinstated the 40 CFR part 191 disposal standards, except those portions that were the specific subject of the remand by the First Circuit;

(2) required us to issue standards to replace the portion of the challenged standards remanded by the court; and

(3) exempted the Yucca Mountain site from the 40 CFR part 191 disposal standards.

EPA issued the amended 40 CFR part 191 disposal standards, which addressed the judicial remand, on December 20, 1993 (58 FR 66398).

In August, 1999, we proposed public health and safety, radiation standards for Yucca Mountain, 40 CFR part 197. EPA has finalized the standards for Yucca Mountain based, in part, upon the consideration of the public comments included in this document.

¹ These laws include the Atomic Energy Act of 1954, as amended (42 USC 2011-2296); Reorganization Plan No. 3 of 1970 (5 USC Appendix 1)

Response to Comments

EPA held a 90-day public comment period for the proposed radiation protection standards for Yucca Mountain (August 27, 1999 through November 26, 1999). Sixty-nine (69) sets of written comments were submitted to EPA's Air Docket regarding the proposed standards, although some commenters submitted more than one set of written comments. In addition, the Agency received oral testimony on the proposed standards from 28 speakers during public hearings that were held in Washington, DC; Las Vegas, NV; Amargosa Valley, NV; and Kansas City, MO. Comments received on the proposal were categorized according to topics, which correspond generally to sections in the final rule. A list of the issues addressed in each section can be found at the beginning of each section. While EPA has cross-referenced related topics where possible, it has not done so in every instance. The entire document should be considered as a whole, for it collectively reflects EPA's consideration of public comments. In some cases, EPA has combined or paraphrased comments.

This document addresses comments received on the proposed radiation protection standards for Yucca Mountain by summarizing the views expressed by commenters and presenting EPA's response to the comments. All comments received during the public comment period and the public hearings have been fully considered. Some comments were received after the close of the public comment period on November 26, 1999. These comments were identified as late and placed in the docket. We reviewed these comments and have addressed any significant new issues that were raised in the late comments. We have addressed all significant comments, both written and oral. Responding to comments was difficult in some cases because certain comments did not articulate specific concerns, did not suggest concrete alternatives, or did not substantiate the position advocated.

Each comment is identified by a unique number in parentheses that follows the comment. Appendix A of this document correlates these identification numbers to the docket numbers and name(s) of the commenter. Appendix A also identifies the people who testified at the public hearings and the corresponding comment numbers. Copies of all comments submitted to EPA regarding the proposed certification decision can be found in Air Docket Number A-95-12 Categories IV-D and IV-F. A list of acronyms and the terms they represent are in Appendix B. To locate references used in response to comments or references that are cited in other EPA support documentation, see Docket: A-95-12, Item V-B-1.

The official docket, A-95-12, is located in Room 1500 (first floor in Waterside Mall near the Washington Information Center), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, D.C. 20460 (open from 8:00 a.m. to 4:00 p.m. on weekdays). As provided in 40 CFR Part 2, a reasonable fee may be charged for photocopying docket materials. We also have placed an informational docket in the Lied Library at the University of Nevada-Las Vegas, Research and Information Desk, Government Publications Section (702-895-2200). Hours vary based upon the academic calendar, so we suggest that you call ahead to be certain that the library will be open at the time you wish to visit (for a recorded message, call 702-895-2255).

You may also inspect the informational docket at the Public Library in Amargosa Valley, Nevada (phone 775-372-5340). As of this date, the hours are Tuesday through Thursday (10 a.m.-7 p.m.); Friday (10 a.m.-5 p.m.); and Saturday (10 a.m.-2 p.m.). The library is closed daily from 12:30 p.m.-1 p.m. It also is closed Sundays and Mondays.